SEQUENCE LISTING

<110> Allen, Stephen M.
Kinney, Anthony J.

<120> CYCLOPROPANE-FATTY-ACYL-PHOSPHOLIPID SYNTHASE

<130> BB1145 US NA

<140> 09/644,907
<141> 2000-08-24

<150> 60/076,203
<151> 1998-02-27

<160> 11

<170> Microsoft Word Version 7.0A

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<213> Zea mays

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Ser Val Ala Glu Arg Ala Tyr Glu Ala Ala Thr Arg Ser Ala Leu Val

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        35                  40                  45

Ala Leu Glu Arg Asn Leu Ile Pro Asp Ala Val Thr Arg Arg Leu Thr
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Arg Leu Leu Leu Ala Gln Arg Leu Arg Gln Gly Tyr Leu Pro Ser Ala
65                  70                  75                  80

Pro Leu Gln Leu Gln Gln Leu Leu Gln Phe Val His Ser Leu Glu Glu
                85                  90                  95

Met Pro Ile Ala Ile Glu Thr Asp Lys Ala Lys Ala Gln His Tyr Glu
            100                 105                 110

Leu Pro Thr Thr Phe Phe Lys Leu Val Leu Gly Lys Asn Leu Lys Tyr
        115                 120                 125

Ser Ser Cys Tyr Phe Pro Gly Asp Ser Ser Thr Leu Glu Asp Ala Glu
    130                 135                 140

Val Ala Met Met Asp Leu Tyr Cys Glu Arg Ser Lys Leu Gln Asp Gly
145                 150                 155                 160

Gln Ser Ile Leu Asp Val Gly Cys Gly Trp Gly Ser Leu Ser Leu Tyr
                165                 170                 175

Ile Ala Lys Lys Tyr Arg Asn Cys Ser Val Thr Gly Ile Cys Asn Ser
            180                 185                 190

Thr Thr Gln Lys Ala Phe Ile Glu Glu Gln Cys Arg Asp Asn Glu Leu
        195                 200                 205

Ser Asn Ile Glu Ile Ile Val Ala Asp Ile Ser Lys Phe Glu Met Glu
    210                 215                 220

Arg Ser Phe Asp Arg Ile Val Ser Ile Glu Met Phe Glu His Met Lys
225                 230                 235                 240

Asn Tyr Lys Ser Leu Leu Lys Lys Ile Ser Arg Trp Met Lys Glu Asp
                245                 250                 255

Gly Leu Leu Phe Val His Leu Phe Cys His Lys Ala Phe Pro Tyr His
            260                 265                 270

Phe Glu Asp Lys Asn Asp Asp Asp Trp Ile Thr Arg Tyr Phe Phe Thr
        275                 280                 285

Gly Gly Thr Met Pro Ser Ala Asn Leu Leu Leu Tyr Phe Gln Glu Asp
    290                 295                 300

Val Ser Val Val Asp His Trp Leu Val Ser Gly Thr His Tyr Ala Arg
305                 310                 315                 320

Thr Ser Glu Glu Trp Leu Lys Arg Met Asp Lys Ser Ile Thr Ser Ile
                325                 330                 335

Arg Leu Ile Phe Glu Glu Thr Tyr Gly Lys Glu Ser Thr Thr Lys Trp
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Ile Ala Tyr Trp Arg Thr Phe Phe Ile Ser Val Ala Glu Leu Phe Gly
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<212> DNA
<213> Phaseolus lunatus

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gacgccgtca ccaggagact cacgcgcatc cttttggcta ctcgccttcg ctcttcttcc  240
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<211> 355
<212> PRT
<213> Phaseolus lunatus

<400> 4

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Leu Thr Arg Ile Leu Leu Ala Thr Arg Leu Arg Ser Ser Ser Asn Thr
        35                  40                  45

Ser Ser Asp Leu Gln Leu Ser His Leu Gln His Phe Ala His Ser Leu
    50                  55                  60

Gln Glu Met Pro Ile Ala Ile Asn Thr Glu Lys Pro Lys Ser Gln His
65                  70                  75                  80

Tyr Glu Leu Pro Thr Ala Phe Phe Lys Leu Val Leu Gly Ser Asn Leu
                85                  90                  95
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Lys Tyr Ser Cys Cys Tyr Phe Ser Ser Ala Ser Met Thr Leu Glu Asp
100 105 110

Ala Glu Glu Ala Met Leu Lys Leu Tyr Cys Glu Arg Ser Asn Leu Thr
115 120 125

Asp Gly His Thr Val Leu Asp Val Gly Cys Gly Trp Gly Ser Leu Ala
130 135 140

Leu Asn Ile Pro Lys Asn Tyr Thr Asn Cys Arg Val Thr Gly Ile Cys
145 150 155 160

Asn Ser Thr Thr Gln Lys Ala Tyr Ile Glu Glu Lys Cys Arg Asp Leu
165 170 175

Gln Leu Gln Asn Met Asn Ile Ile Val Ala Asp Ile Ser Thr Leu Glu
180 185 190

Met Glu Ala Ser Tyr Asp Arg Ile Phe Ser Ile Glu Met Phe Glu His
195 200 205

Met Lys Asn Tyr Lys Glu Leu Leu Lys Lys Ile Ser Lys Trp Met Lys
210 215 220

Glu Asp Ser Leu Leu Phe Val His Tyr Phe Cys His Lys Ala Phe Ala
225 230 235 240

Tyr His Phe Glu Asp Lys Asn Glu Asp Asp Trp Ile Thr Arg Tyr Phe
245 250 255

Phe Ser Gly Gly Thr Met Pro Ser Ala Asn Leu Leu Leu Tyr Phe Gln
260 265 270

Asp Asp Val Thr Val Ile Asn His Trp Leu Val Asn Gly Lys His Tyr
275 280 285

Ser Gln Thr Ser Glu Glu Trp Leu Lys Arg Met Asp Gln Arg Met Thr
290 295 300

Tyr Ile Lys Pro Ile Met Gln Ser Thr Tyr Gly Asn Asp Ser Ala Thr
305 310 315 320

Lys Trp Thr Ala Tyr Trp Arg Thr Phe Phe Ile Ser Val Ala Glu Leu
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Lys Lys Lys
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<222> (476)
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ccggcgcctg acgcggctgc tgctcgcgca gcgcctccgc ctcggctacc tcccctcctc 240
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catttttcaa gctggttctt ggaaggaatc tcaagtacag ctcatgttac ttccctgacg 420
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<210> 6
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<213> Oryza sativa

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20 25 30

Leu Thr Arg Leu Leu Leu Ala Gln Arg Leu Arg Leu Gly Tyr Leu Pro
35 40 45

Ser Ser Ser Ser Ser Ala Pro Leu His Leu His His Leu Leu Leu Phe
50 55 60

Ala His Ala Leu Glu Glu Met Pro Ile Ala Ile Glu Thr Glu Lys Ala
65 70 75 80

Lys Xaa Gln His Tyr Glu Leu Pro Thr Thr Phe Phe Lys Leu Val Leu
85 90 95

Gly Arg Asn Leu Lys Tyr Ser Ser Cys Tyr Phe Pro Asp Glu Ser Ser
100 105 110

Thr Leu Glu Asp Ala Xaa Val
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<210> 7
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<212> DNA
<213> Glycine max

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<213> Glycine max

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Cys Cys Phe His Ser Tyr Ser Tyr Ser Glu Gly Ser Met Glu Gly Thr
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Met Gln Leu Ala Tyr Glu Thr Val Val Lys Leu Met Leu Ala Ala Leu
35 40 45

Glu Arg Asn Val Leu Pro Asp Val Ile Thr Arg Arg Leu Thr Arg Leu
50 55 60

Leu Leu Ala Thr Arg Leu Arg Ser Ala Tyr Lys Pro Ser Ser Gln Leu
65 70 75 80

Gln Leu Ser Asp Leu Leu Tyr Phe Ala His Ser Leu Gln Glu Met Pro
85 90 95

Ile Ala Ile Asn Thr Asp Lys Pro Lys Ser Gln His Tyr Glu Leu Pro
100 105 110

Thr Ala Phe Phe Lys Leu Val Leu Gly Asn Asn Leu Lys Tyr Ser Cys
115 120 125

Cys Tyr Phe Ser Ser Ala Ser Met Thr Leu Asp Asp Ala Glu Glu Ala
130 135 140

Met Leu Lys Leu Tyr Cys Glu Arg Ser Asn Leu Lys Asp Gly His Thr
145 150 155 160

Val Leu Asp Val Gly Cys Gly Trp Gly Ser Leu Ala Leu Tyr Ile Ala

165 170 175

Lys Asn Tyr Thr Asn Cys Arg Val Thr Gly Ile Cys Asn Ser Thr Thr
180 185 190

Gln Lys Ala Tyr Ile Glu Glu Lys Cys Arg Asp Leu Gln Leu Gln Asn
195 200 205

Leu Asn Ile Ile Val Ala Asp Ile Ser Thr Phe Glu Met Glu Thr Ser
210 215 220

Tyr Asp Arg Ile Phe Ser Ile Glu Met Phe Glu His Met Lys Asn Tyr
225 230 235 240

Lys Asp Leu Leu Lys Lys Ile Ser Lys Trp Met Lys Glu Asp Ser Leu
245 250 255

Leu Phe Val His Tyr Phe Cys His Lys Ala Phe Ala Tyr His Phe Glu
260 265 270

Asp Lys Asn Glu Asp Asp Trp Ile Thr Arg Tyr Phe Phe Thr Gly Gly
275 280 285

Thr Met Pro Ser Ala Asn Leu Leu Leu Tyr
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<212> DNA
<213> Triticum aestivum

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ag 722

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<212> PRT
<213> Triticum aestivum

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20 25 30

Arg Arg Leu Thr Arg Phe Leu Leu Ala Gln Arg Leu Arg Leu Gly Thr
35 40 45

Leu Pro Ser Ala Pro Leu Gln Leu Gln Asp Leu Leu Leu Phe Ala His
50 55 60

Ser Leu Glu Gly Met Pro Ile Ala Ile Glu Thr Asp Thr Ala Lys Thr
65 70 75 80

Gln His Tyr Glu Leu Pro Thr Thr Phe Phe Lys Leu Val Leu Gly Lys
85 90 95

Asn Leu Lys Tyr Ser Ser Cys Tyr Phe Pro Asp Asp Ser Ser Thr Leu
100 105 110

Glu Asp Ala Glu Val Ala Met Leu Glu Leu Tyr Cys Glu Arg Ala Gln
115 120 125

Leu Gln Asp Gly Gln Ser Ile Leu Asp Val Gly Cys Gly Trp Gly Ser
130 135 140

Leu Ser Val Tyr Ile Ala Lys Lys Tyr Arg Asn Cys Asn Ile Thr Gly
145 150 155 160

Ile Cys Asn Ser Thr Thr Gln Lys Gly Phe Ile Glu Lys Gln Cys Arg
165 170 175

Glu Asn Glu Leu Ser Asn Val Glu Ile Ile Val Ala Asp Ile Ser Lys
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Phe Glu Met
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<210> 11
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<212> PRT
<213> Escherichia coli

<400> 11

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            20                  25                  30

Gly Ser Ala Pro Ala Asp Ile Arg Val Lys Asn Pro Asp Phe Phe Lys
        35                  40                  45

Arg Val Leu Gln Glu Gly Ser Leu Gly Leu Gly Glu Ser Tyr Met Asp
    50                  55                  60

Gly Trp Trp Glu Cys Asp Arg Leu Asp Met Phe Phe Ser Lys Val Leu
65                  70                  75                  80

Arg Ala Gly Leu Glu Asn Gln Leu Pro His His Phe Lys Asp Thr Leu
                85                  90                  95

Arg Ile Ala Gly Ala Arg Leu Phe Asn Leu Gln Ser Lys Lys Arg Ala
            100                 105                 110

Trp Ile Val Gly Lys Glu His Tyr Asp Leu Gly Asn Asp Leu Phe Ser
        115                 120                 125

Arg Met Leu Asp Pro Phe Met Gln Tyr Ser Cys Ala Tyr Trp Lys Asp
    130                 135                 140

Ala Asp Asn Leu Glu Ser Ala Gln Gln Ala Lys Leu Lys Met Ile Cys
145                 150                 155                 160

Glu Lys Leu Gln Leu Lys Pro Gly Met Arg Val Leu Asp Ile Gly Cys
                165                 170                 175

Gly Trp Gly Gly Leu Ala His Tyr Met Ala Ser Asn Tyr Asp Val Ser
            180                 185                 190

Val Val Gly Val Thr Ile Ser Ala Glu Gln Gln Lys Met Ala Gln Glu
        195                 200                 205

Arg Cys Glu Gly Leu Asp Val Thr Ile Leu Leu Gln Asp Tyr Arg Asp
    210                 215                 220

Leu Asn Asp Gln Phe Asp Arg Ile Val Ser Val Gly Met Phe Glu His
225                 230                 235                 240

Val Gly Pro Lys Asn Tyr Asp Thr Tyr Phe Ala Val Val Asp Arg Asn
                245                 250                 255

Leu Lys Pro Glu Gly Ile Phe Leu Leu His Thr Ile Gly Ser Lys Lys
            260                 265                 270

Thr Asp Leu Asn Val Asp Pro Trp Ile Asn Lys Tyr Ile Phe Pro Asn
        275                 280                 285

Gly Cys Leu Pro Ser Val Arg Gln Ile Ala Gln Ser Ser Glu Pro His
    290                 295                 300

Phe Val Met Glu Asp Trp His Asn Phe Gly Ala Asp Tyr Asp Thr Thr
305                 310                 315                 320

Leu Met Ala Trp Tyr Glu Arg Phe Leu Ala Ala Trp Pro Glu Ile Ala
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                325                 330                 335

Asp Asn Tyr Ser Glu Arg Phe Lys Arg Met Phe Thr Tyr Tyr Leu Asn
            340                 345                 350

Ala Cys Ala Gly Ala Phe Arg Ala Arg Asp Ile Gln Leu Trp Gln Val
        355                 360                 365

Val Phe Ser Arg Gly Val Glu Asn Gly Leu Arg Val Ala Arg
    370                 375                 380
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